Abstract

TOPEX/POSEIDON -An **International Project**

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Two-thirds of the Earth is covered by water. Oceans are the major reservoir of heat on our planet, and ocean circulation is Earth's primary means of distributing heat around the globe. The exchange of heat between the oceans and the atmosphere have a dramatic effect on our climate. Understanding ocean circulation is necessary for predicting climate change. TOPEX/POSEIDON, a joint project between the United States and France, is the first space mission specifically designed to study the circulation of the world's oceans. A collaborative effort of the National Aeronautics and Space Administration (NASA) and the Centre National d'Etudes Spatiales (CNES) has resulted in revolutionary sea level measurements that are accurate to within a few centimeters over thousands of kilometers of open ocean, This cooperation began in 1983 and resulted in the launch of the TOPEX/POSEIDON satellite by an Ariane launch vehicle on August 10, 1992. Radar altimetry from space is being utilized to provide global ocean topography maps.

This talk describes the initial planning, design, development, and conduct of the mission, and the contributions of NASA and CNES. Results of this mission will be summarized; results that have been so successful that NASA and CNES are currently planning a "follow-on" to this mission. This next project will ensure continuation of these unprecedented measurements well into the next century.